# SOIL CONSERVATION LITERATURE

## SELECTED CURRENT REFERENCES

V.6 January/February, 1942 No.1



Compiled by the library staff of the U.S. Soil Conservation Service, Washington, D.C.

The publications listed herein may, in most cases, be borrowed from the Library of the Soil Conservation Service by members of the Washington and field staffs.

Loan requests should be submitted on Form SCS-405; those from field offices being routed through Regional Office Libraries. Complete citations, together with library call numbers, should always be included.

Ruby W. Moats

Ruby W. Moats
Librarian

## PERIODICAL ARTICLES

### Basin Listing

Morton,N.B. Distributing moisture. Capper's Farmer 53(1):11,illus. Jan.1942. 6 M693
Basin listing.

### Contour Plowing

Loyd,Glennon. Singing plowboy plows crooked to win. U.S.Soil Conserv. Serv.Soil Conserv.7(7):169-171,illus. Jan.1942. 1.6 So3S
William S.Moy, winner of the first dairyland contour plowing match, October 8,1941,near La Crosse,Wis.

### Erosion Control Plants

Production of Cabuya in Ecuador. Natl.Farm Chemurgic Council News Letter 2(22):171. Nov.25,1941.
"The United States,with its large jute industry,is particularly interested in the various vegetable fibers grown in the Western Hemisphere.If normal trade routes from India should become seriously disrupted,jute substitute fibers might be necessary.In Ecuador a plant known as fourcroya grows wild over an extensive area.The plant is used for fences,as a wind break,and to prevent erosion,according to a recent report from the American commercial attaché at Quito."

### Farm Woodlands

O'Byrne,Wilbur. Farm woodland management. South.Planter 102(12):15. Dec.1941. 6 So89
"Good management of farm woods divides naturally into three groups of activities:(1)protecting the woods from harmful agencies;(2)growing a profitable crop; and (3)making the harvest without lowering the production capacity of the property."

### Farms and Farming

Collier,G.W. Common errors in evaluating farm practices. Jour.Farm Econ. 23(4):877-884,illus. Nov.1941. 280.8 J822

Reed,E.H. Consider the farmer as well as the farm. U.S.Soil Conserv. Serv.Soil Conserv.7(7):153-154,173. Jan.1942. 1.6 So3S
'Farms should be planned in accordance with the needs and adaptabilities of the land and the needs and adaptabilities of the farmer."

### Fire Prevention and Control

McClymonds,A.E. Cooperation in fire fighting. U.S.Soil Conserv.Serv. Soil Conserv.7(7):174-175. Jan.1942. 1.6 So3S

Floods and Flood Control

Elliott,Malcolm. Evaluation of flood losses and benefits. Amer.Soc.Civ. Engin.Proc.67(10):1933-1934. Dec.1941. 290.9 Am3P
Paper with above title by Edgar E.Foster appeared in May 1941 Proceedings.

Fry,A.S. Big waters or little streams. Agr.Engin.22(12):424-426,illus. Dec.1941. 58.8 Ag83
"Ordinarily floods on streams draining small watersheds may cause considerable damage but are not likely to ruin completely the lands along the streams.However,in the mountainous valleys of the Appalachians in western North Carolina and eastern Tennessee,floods which occur over these smaller stream watersheds are of such tremendous proportions that entire creek valleys may be destroyed or greatly devastated so that future utilization of the valley by the inhabitants is gravely menaced."

Harrold,L.L. Floods in the Navajo country. U.S.Soil Conserv.Serv.Soil Conserv.7(7):172-173,illus. Jan.1942. 1.6 So3S
"The author is hydraulic engineer,hydrologic division,Soil Conservation Service.The article is based on data furnished by D.S.Hubbell, project supervisor,and T.E.Utterback,assistant hydraulic engineer, Navajo Experiment Station,N.Mex."

Forage Plants

Bailey,R.Y. Check-up on perennial forage plants. U.S.Soil Conserv.Serv. Soil Conserv.7(6):142-145,illus. Dec.1941. 1.6 So3S

Grasses

Bromegrass. U.S.Soil Conserv.Serv.Upper Miss.Reg.Prog.Exch.Tech.Sup. 7pp.,mimeogr. Milwaukee,Dec.18,1941. 1.9604 P941

Burton,G.W. Tift Sudan,a Utopia grass for southeast.New disease resistant variety yields twofold in hay over common;provides excellent pasturage, limited seed stocks available. South.Seedsman 5(1):7,31,35,illus. Jan.1942. 61.8 So8

Muckenhirn,R.J.,Ahlgren,H.L.,and Farrington,R.A. Grass,friend of the farmer and the soil. Wis.Conserv.Bul.6(11):23-25,illus. Nov.1941. 279.8 W752
"Third in a series of nine study helps on important phases of soil conservation.The content is prepared by staff members of the College of agriculture of the University of Wisconsin in cooperation with the Department of public instruction.It is believed teachers will find this series particularly helpful in teaching the underlying principles of soil conservation."

Ground-water Flow

Rhoades,Roger and Sinacori,M.N. Pattern of ground-water flow and solution. Jour.Geol.49(8):785-794,illus. Nov./Dec.1941. 403 J82
"The intensive geologic investigations during the past few years in connection with the design and construction of dams and other engineering works have established the common existence of deep bedrock solution,

which has occurred well below the water table.Although this deep flow and solution are entirely harmonious with hydraulic principles,an important aspect of the problem of the optimum depth of ground-water flow and solution is the matter of adjustment of the subsurface circulation.As this adjustment becomes more perfect,deep flow and solution progressively diminish and flow and solution in the upper levels of the zone of saturation increase correspondingly.In the latter stages of the cycle,cave formation probably occurs at higher levels by the concentration of lateral flow through high-level master-conduits. In the earlier stages,flow is not concentrated but is distributed throughout the entire vertical section,oriented along arcuate paths which descend deeply before recurving upward to the point of discharge."

Highway Erosion Control

Erosion control along state highways cuts expensive maintenance costs.Roadside improvement now recognized as essential part of highway building - eliminates construction scars along roads. Outdoor Ind.8(10):21,26, illus. Oct.1941. 279.8 Ou82

Johnson,J.W. and Brown,H.A. Principles affecting the control of erosion in road cuts and roadside ditches. U.S.Soil Conserv.Serv.Soil Conserv. 7(6):138-140,illus. Dec.1941. 1.6 So3S

Irrigation and Drainage

Israelsen,O.W. Lining a leaky irrigation canal with clay saves both water and soil.Water lost from unlined canals would irrigate many additional acres. Utah Agr.Expt.Sta.Farm & Home Sci.2(3):3,10. Sept. 1941. 100 Ut1F

Lamont,N. Automatic device to ensure permanently open mole drain outlets. New Zeal.Jour.Agr.63(4):332-333,illus. Oct.15,1941. 23 N48J

The measuring of water[South Africa] Citrus Grower no.93, pp.1,3,5,illus. Oct.31,1941. 80 C495

"There are two main points that every irrigation farmer should know in order to eliminate the large amount of guess work which is so often associated with this problem - how much water is applied to the land and how deeply it penetrates the soil."

Kudzu

Bailey,R.Y. How to store kudzu plants. Prog.Farmer(Ga.-Ala.-Fla.Ed.) 56(11):17. Nov.1941. 6 P945G

Land Tenure

Osgood,O.T. Some observations on the relation of farm land tenure to soil erosion and depletion. Jour.Land and Pub.Util.Econ.17(4):[410]-422. Nov.1941. 282.8 J82

Locust Trees

Hopp,Henry. Mystery among the locusts.Riddle of valuable shipmast or old fashioned locust challenges conservationists. Amer.Forests 48(1): 27-30,46,illus. Jan.1942. 99.8 F762

Maps and Mapping

Beamon,W.F. and Kennedy,M.S. Photographic method of preparing farmer-district agreement maps. U.S.Soil Conserv.Serv.Soil Conserv.7(6):146-147,149, illus. Dec.1941. 1.6 So3S

Mesquite

Fisher,C.E. Mesquite eradication studies at Spur,Texas. Cattleman 28(8): 34-35,37,illus. Jan.1942. 49 C29
Texas agricultural experiment station in cooperation with the Soil conservation service.

Orchard Management

Pickett,B.S. Orchard soil management. Minn.Hort.69(9):163-164,174. Nov.1941. 81 M66

Schrader,A.L. Mulching of orchard soils. East.Fruit Grower 4(9):6,15,19,21. Nov.1941. 80 Ea73

What means are available to build up our orchard soils? Ill.State Hort.Soc. Ill.Hort.30(4):[2-4] Nov.1941. 81 I166
Mulching,annual cover crops,terracing and contour planting,sub-soiling.

Pastures

Loyd,Glennon. A pasture that does not take "annual leave"[Spring Valley, Minn.] U.S.Soil Conserv.Serv.Soil Conserv.7(6):140-141,145,illus. Dec.1941. 1.6 So3S

Rayner,G.B. Irrigated pastures in the north of Victoria. Victoria Dept. Agr.Jour.39(Pt.2):533-538,illus. Nov.1941. 23 V66J

Percolation

Nelson,L.B.and Muckenhirn,R.J. Field percolation rates of four Wisconsin soils having different drainage characteristics. Amer.Soc.Agron.Jour. 33(11):1028-1036,illus. Nov.1941. 4 Am34P
"Literature cited,"p.1036.
"Field percolation rates were determined on undisturbed soil profiles of two poorly-drained and two well-drained Wisconsin soils by means of a buffer compartment method.In addition,laboratory percolation rates, volume weights,total porosities,and maximum water-holding capacities were determined on soil cores taken from the different horizons and substrata of each of the four soils.
"The buffer compartment method was found to give good measurement of the field percolation rate of the soil and is believed to possess several advantages over the steel cylinder method which is commonly

used in infiltration determinations.The lateral movement of water is diminished by means of buffer compartments,the soil structure is undisturbed,and the apparatus is simple,inexpensive,and very easily installed.

"The poorly drained Spencer silt loam and Superior clay loam had field percolation rates of 0.04 inch per hour or less.Percolation through the laboratory cores showed the $B_2$ horizons and substrata to be practically impermeable to water movement.The impervious subsoils had relatively high volume weights,low total porosities,and low water-holding capacities.

"The well-drained Marathon silt loam had a field percolation rate of 0.3 inch per hour,while that of the Miami silt loam was 0.5 inch per hour.The laboratory percolation rates of the subsoils and substrata were over 0.4 inch per hour.In general,the subsoils of these well-drained soils had lower volume weights,higher total porosities,and higher water-holding capacities than did the poorly drained soils.

"The results of this study correlate well with the characteristics of the soil profile and explain to a large extent,the differences in cropping and drainage conditions found on these soils."

Plant Cover

Hansen,R. Pflanzendecke und bodenerhaltung im schrifttum der Vereinigten Staaten von Nordamerika.

In German.Translated title:Plant cover and soil conservation in the literature of the United States of America.

"A review with 20 references and list of 29 species of grasses in 12 genera,with notes on their properties and regions of employment." Abs. Soils and Fert.4(4):173. 1941.

Plot Experiments

Brandt,A.E. The design of plot experiments for measurement of run-off and erosion. Agr.Engin.22(12):429-432,436. Dec.1942. 58.8 Ag83

Paper presented before the Soil and water conservation division at the annual meeting of the American society of civil engineers at Knoxville,Tenn.,June 1941.

Rain Gauges

Parsons,D.A. Calibration of a Weather Bureau tipping-bucket raingage. U.S. Monthly Weather Rev.69(7):205. July 1941. 1 W37M

Rainfall

Visher,S.S. Rainfall conditions as a southern handicap. Jour.Geog.40(8): 302-306. Nov.1941. 278.8 J82

The facts given in this paper "as to some rainfall handicaps of the South indicate clearly that the people of the South are by no means entirely to blame for the widespread poverty and cultural backwardness or for the serious soil erosion.While erosion is much increased by the type of agriculture practiced,cotton culture is largely a logical response to the rainfall and temperature conditions.Indeed the solution of the South's problem is by no means simple,partly because of the rainfall conditions here discussed."

Ranges

Fitzgerald,O.A. Big-scale range rebuilding. West.Farm Life 43(23):5,8, illus. Dec.1,1941. 6 R153

Run-off

Hicks,W.I. Surface runoff determination from rainfall without using coefficients.Discussion. Amer.Soc.Civ.Engin.Proc.67(10):1925-1932, illus. Dec.1941. 290.9 Am3P
Paper with above title by W.W.Horner appeared in April 1941 Proceedings.

Snyder,F.F. Method of predicting the runoff from rainfall.Discussion. Amer. Soc.Civ.Engin.Proc.67(10):1935-1936. Dec.1941. 290.9 Am3P
Paper with above title by Ray K.Linsley,Jr.and William C.Ackerman appeared in June 1941 Proceedings.

Sand Dunes

Lehotsky,K. Sand dune fixation in Michigan. Jour.Forestry 39(12):993-1004, illus. Dec.1941. 99.8 F768
"Literature cited,"pp.1003-1004.
"The stabilization of sand dunes is a difficult task at best.In Europe, especially in France and in Germany,large areas of sand dunes,once liabilities,have been converted into assets.There are also extensive sand dune areas in the United States.These are found principally along the Pacific and Atlantic coasts and along the shores of Lake Michigan. The stabilization of some of the Michigan dunes has been undertaken recently by the Soil Conservation Service.The methods used and their success are described in[this article]."

Miles,Wayne. Stop those sand dunes. Cattleman 28(7):73,75,illus. Dec. 1941. 49 C29
"Control of sand dunes to prevent them from spreading over adjacent land is a problem in many of the sandier areas of New Mexico and other parts of the Southwest."

Sedimentation and Silt

Ahmed,A.A. "A method of estimating the maximum possible silt deposit upstream of dams constructed in silt-carrying rivers." Paper No.5245. Inst.Civ.Engin.Jour.16(7):399-403,illus. June 1941. 290.9 In74J

Einstein,H.A. Formulas for the transportation of bed load.Discussion. Amer.Soc.Civ.Engin.Proc.67(10):1917-1920. Dec.1941. 290.9 Am3P
Paper with above title by H.A.Einstein appeared in March 1941 Proceedings.

Seeds

Pearse,C.K. Range grass seed:a promising crop for Utah. Utah Farmer 61(5): 9. Oct.10,1941. 6 D45

Shelterbelts and Windbreaks

Minderman,Earl. Sentinels of the soil defy blustering enemy. Farm and Ranch 60(12):8,illus. Dec.1941. 6 T31
Shelterbelt northeast of Paducah,Texas.

Windbreaks require care.Proper management is essential in maintaining an efficient windbreak. Calif.Citrograph 27(3):67,illus. Jan.1942. 80C125

Soil Conservation

Bennett,H.H. Conservation along the Oregon trail. U.S.Soil Conserv.Serv. Soil Conserv.7(6):129-[134],137,illus. Dec.1941. 1.6 So3S

Bennett,H.H. Humptulips and White Salmon. U.S.Soil Conserv.Serv.Soil Conserv.7(7):159-166,illus. Jan.1942. 1.6 So3S
Trip to the Northwest.

Bennett,H.H. The program of the United States Soil Conservation Service. Internatl.Rev.Agr.[Rome]32(10):323T-330T. Oct.1941. 241 In82
"In this article,the fourth of a series on soil conservation,the program of the United States Soil Conservation Service is explained by its Chief.After a short historical introduction dealing with the creation of the Service and its place amidst the agencies of the Federal Government,the action on five different fronts:research,surveys and mapping,information and education,direct assistance to farmers,land purchase and development,is treated briefly in order to show the part played by each of these branches in the total program.Soil conservation research and control measures will be dealt with more fully in two other articles to be published in the next numbers of this Bulletin.
"The organization of an efficient soil conservation service has to take into account the existing constitution and laws of the respective country.In the special case of the United States,the fact had to be considered that the Federal Government is limited in the exercise of its granted powers and that the 48 states have a large measure of legal autonomy.A special article on this aspect of the problem is given contemporaneously in the Monthly Bulletin of Agricultural Economics and Sociology."

Bennett,H.H. Some relations of soil conservation to rivers and harbors. Address...at special session of National rivers and harbors congress, Miami,Florida,November 14,1941. 10pp.,mimeogr. Washington,D.C., 1941. 1.96 Ad62

Davis,D.O. Soil and water conservation. Jour.Geog.40(8):307-310. Nov. 1941. 278.8 J82
"Résumé of talk on soil and water conservation at National Council of Geography Teachers meeting,Baton Rouge,Louisiana,December 27,1940."

Dickson,R.E. Research results of soil and water conservation in Texas. Tex.Acad.Sci.Trans.(1938/39)23:21-23. 1940. 500 T31 v.23 1938/39

Duncan,Kunigunde. Deserts on the run. Tomorrow 1(5):11-15,illus. Jan. 1942.

Hammett,J.W. Progress in soil conservation in Louisiana. La.Conserv.Rev. 10(2):22-27,illus. Summer 1941. 279.9 L93C

Johnson,N.W. Conservation - an objective or an ideal? Jour.Farm Econ. 23(4):819-832. Nov.1941. 280.8 J822

Knick,J.C. Variety of farm income sources plus soil conservation brings success in Roosevelt County[Montana]. Mont.Farmer 29(8):[5],illus. Dec.15,1941. 6 M764

Kriebel,R.M. Land must be managed,loved to be productive,says Kriebel. Tenn.Conserv.5(12):8. Dec.1941. 410 T252

Moore,G.C. Reducing highway maintenance costs through farm land conservation. back cover,166-168,illus. Jan.1942. 1.6 So3S

Nichols,M.L. Soil conservation research in the United States. Internatl. Inst.Agr.Monthly Bul.Agr.Sci.and Pract.32(11):[345T]-355T. Nov. 1941. 241 In82

Rankin,F.A. Conservation goes on the air. U.S.Soil Conserv.Serv.Soil Conserv.7(6):135-137. Dec.1941. 1.6 So3S

Reichstein,Amiel. Soil conservation helps to protect water supply[Fairfield, Iowa] Pub.Works 72(12):33-35,illus. Dec.1941. 290.8 M922
"With three reservoirs silting up,one alarmingly,a plan for preventing further silting has been adopted."

Tucker,E.A. Conservation on small cotton-corn farms. Okla.Agr.Expt.Sta. Current Farm Econ.14(6):185-202,illus. Dec.1941. 100 Ok4

Weybright,Victor. Friends of the Land. Free Amer.5(11):12-14. Nov. 1941

Woodman,Ken. Farming for the future. An interview with Louis Bromfield. Free Amer.5(12):3-5. Dec.1941.

Soil Erosion and Control

Bryan,Kirk. Pre-Columbian agriculture in the southwest,as conditioned by periods of alluviation. Assoc.Amer.Geog.Ann.31(4):219-242. Dec. 1941. 500 As73
"In this paper,the agricultural practices of the Puebloans will be described.The effect on these practices of alternate periods of erosion and alluviation will be discussed.The available information on the correlation of local sequences of erosion and alluviation will be summarized.This material w ill be analyzed to set forth the relation of these geological events to possible changes in climate,and to geographic changes which affected the distribution of the pre-Columbian agricultural population."

Egler,F.E. Unrecognized arid Hawaiian soil erosion.Discussion. Science 94(2448):513-514. Nov.28,1941. 470 Sci2

Hurst,F.J. J.T.Brown rebuilt a worn-out farm[Hinds County,Mississippi] Better Crops with Plant Food 25(9):6-8,44-45,illus. Nov.1941. 6 B46

Jackson,P.M. Turned eroded hillsides into paying dairy farm. South.Planter 102(12):4,illus. Dec.1941. 6 So89

Mortimore,M.E. A double check on erosion. U.S.Soil Conserv.Serv.Soil Conserv.7(6):150-151,illus. Dec.1941. 1.6 So3S
"Estimates of the volume of soil losses as well as the degress of erosion are important in connection with planning conservation programs for flood control,and for protection of reservoirs,stream channels,etc., against damages by sedimentation."

Ward,F.C. Modern conservation methods check erosion on one million Georgia acres. Contact 7(5):[1]. Dec.1941. 80 C76

Soil Erosion and Control. Foreign Countries

Dege,Wilhelm. Uber schneefleckenerosion;einige beobachtungen in Nordnorwegen und auf Spitzbergen. Geog.Anz.41(1/2):8-11. 1940. Library of Congress "Literaturnachweis,"p.11.
In German.Translated title:On snowflake erosion;some observations in Norway and at Spitzbergen.

Graham,G.R. Nature and soil conservation. Jamaica Agr.Soc.Jour.45(10):359-360,363,illus. Oct.1941. 8 J223

Leeuwen,W. van. Aanteekeningen over erosie. Bergcultures no.44, pp.1498-1502. Nov.1,1941. 22.5 B45
In Dutch.Translated title:Notes on erosion.

McIlwaine,Sir Hobert. The Natural resources act,1941. Rhodesia Agr.Jour. 38(10):538-545. Oct.1941. 24 R34

Soil erosion and the cane grower.An informative address. So.African Sugar Jour.25(10):525,527,529. Oct.1941. 65.8 So8
"The continuous process of destruction of fertile lands by wind and water erosion has given rise to grave concern in South Africa.The Department of Agriculture has for many years endeavoured by lectures and literature to impress upon the agricultural community the dangers of the policy of drift.Preventive measures suggested have in many instances been effectively applied,but there is still remarkable indifference to the warnings that have been given against failure to combat the ravages of nature.
"So far only small contributions to the literature of soil erosion has come from South African cane farmers,the majority of whom,in Natal

grow and produce their cane on slopes of varying degrees of steepness naturally vulnerable to erosion and aided by continuous one-crop cultivation. [This address]delivered by Dr.H.W.Kerr,Director of the Queensland Bureau of Sugar Experiment Stations,at Meringa Sugar Experiment Stations,will be of especial interest.It is a sage observation on the pernicious thieves of soil fertility,and an invitation to man 'to enter into partnership with the soil,' in his own interest and in the interest of the community."

Stebbing,E.P. Forests and erosion. Empire Forestry Jour.20(1):25-38. 1941. 99.8 Em72

Soil Moisture

Belichenko,D.M. Relation between the capillary rise and the specific surface of foundation soils. Pedology no.5, pp.59-70. 1940. 57.8 P34
In Russian with German summary.
Theoretical.

Browning,G.M. Relation of field capacity to moisture equivalent in soils of West Virginia. Soil Sci.52(6):445-450. Dec.1941. 56.8 So3
"References,"p.450.
"The relation of moisture equivalent to field capacity in some soils of West Virginia was determined.The results may be summarized as follows: For the average of all sampling depths the ratio of field capacity to moisture equivalent is unity in the vicinity of a moisture equivalent of about 21 percent;more than unity for moisture equivalents,below 21 percent;and less than unity for moisture equivalents above 21 percent. The ratio decreases slightly with depth,but the shape of the curves for different depths is,in general,the same.
"Well-drained soils come to a more or less constant moisture content within a short time after application to an excess of water;impermeable soils require a much longer time.
"The possibilities and limitations of using field capacity or moisture equivalent,corrected for texture,in determining capillary porosity,are discussed in relation to the more precise methods for determining pore-size distribution."

Leamer,R.W.and Shaw,Byron. A simple apparatus for measuring noncapillary porosity on an extensive scale. Amer.Soc.Agron.Jour.33(11):1003-1008, illus. Nov.1941. 4 Am34P
"Literature cited,"p.1008.
"A simple,inexpensive apparatus has been devised which makes possible the measurement of 'noncapillary' porosity on a large number of samples. The apparatus uses the pressure deficiency method of removing water from a saturated sample.The pressure deficiency is developed by a difference in level of two ends of a water column.The higher end of the column is suspended by an ordinary desk blotter on which the samples are placed.
"The apparatus described accommodates 30 3-inch core samples;however, there is no limit to the number that may be used.
"It is suggested that this apparatus may be useful in other types of investigations."

Soil Physics

Guliasashvili,V.Z. Physical properties of soils of the alpine and forest zones and their role in the hydrology of the country. Pedology no.5, pp.32-45. 1940. 57.8 P34

In Russian with English summary.

"Permeability,porosity,water and air capacity were the soil properties studied on soils of the Caucasian range.

"There was a considerable difference in the physical properties of the two kinds of soils.The peat soils of the alpine region had the greatest porosity,water-holding and air capacity,the brown earths of the forest zone coming second in these respects.These two soil types were also superior to other types with regard to permeability.They are therefore,of particular importance in the control of run-off.Mountain meadow soils,owing to their low permeability,increase run-off and their encroachment on the forest zone is highly undesirable." Abs.Imp.Bur. Soil Sci.Soils and Fert.4(2):67. 1941.

Soil Sampling Methods

U.S.Soil conservation service.Division of irrigation. Soil sampling equipment. Conserv.Assoc.South.Calif.Conserv.Activ.9(11):107. Nov.1941. 279.9 C763

Soil Types

Martin,J.P. The organic matter in Collington sandy loam and in the eroded material. Soil Sci.52(6):435-443. Dec.1941. 56.8 So3

"References,"p.443.

"Experiments were made on Collington sandy loam to determine organic matter and nitrogen losses due to erosion under various organic matter treatments,and to compare the amount and nature of the humus in the soil with that which is eroded away from the soil.It was found that the eroded material in most cases contained from three to eight times as much organic matter and nitrogen as the soil itself.The amount of organic matter and nitrogen in the eroded material depended upon the intensity of the rainfall,upon plot treatment,and upon the individual plot.During approximately 2 1/2 years the percentage organic matter in the soil lost by erosion was four to five times as great as that in the soil of the plots.From plots representing four annual treatments; namely,fertilizer,fertilizer + rye cover crop, fertilizer + 20 tons of stable manure,and fertilizer + rye cover crop + 20 tons of stable manure, averages of 1,185, 730, 950, and 415 pounds of organic matter per acre were lost during the 2 1/2-year period.

"Soil eroded from plots contained greater percentages of nitrogenous complexes and hemicelluloses that the original soil,suggesting selective erosion of certain fractions of the organic matter."

Soils

Jeffries,C.D. A method of preparing soils for petrographic analysis. Soil Sci.52(6):451-454. Dec.1941. 56.8 So3

"A method has been described for removing iron oxide,silica, and alumina,existing as coatings and cementing agents on soil grains, preparatory to making petrographic studies of soil minerals.This method

involves the reduction of the iron oxide by means of nascent hydrogen and its solution by oxalic acid,after which it is easily removed by washing.This treatment removed about 94 per cent of the total Fe2O3 and small amounts of SiO2, Al2O3, and TiO2. The treatment is rapid, and produces excellent soil separates for subsequent petrographic study, apparently does not attack the soil minerals, and allows attention to a large number of samples at one time."

Lutz,H.J. The nature and origin of layers of fine-textured material in sand dunes. Jour.Sedimentary Petrol.11(3):105-123. Dec.1941. 398.8 J82

"Buried soils in sand dunes of Cape Cod,Massachusetts,and near Glen Haven,Michigan,contain layers of fine-textured material.Field relations of the strata demonstrate that the material was wind-laid.The size,shape, and specific gravity of the fine material indicate that it was transported in suspension by wind.

"Occurrence of plant remains in all of the fine-textured layers,and the fact that fine material is accumulating in forest stands at the present time points to the important role that vegetation plays in the accumulation of wind-blown material,even in humid regions.Wind-blown material accumulates in areas supporting vegetation as a result of deposition due to decreased wind velocity and as a result of preservation of the deposits from wind and water erosion."

Taxation

Ibach,D.B. Tax leverage for efficient land exploitation:A differential levy on site values as an aid to land use adjustments. Amer.Jour.Econ.and Sociol.1(1):13-36. Oct.1941.

Tillage

Carter,L.S. Tillage and crop residue management. U.S.Soil Conserv.Serv. Soil Conserv.7(7):155-158,173,illus. Jan.1942. 1.6 So3S

Tree Rings

Glock,W.S. Growth rings and climate. Bot.Rev.7(12):649-713. Dec. 1941. 450 B6527

Bibliography,pp.705-713.

"The concensus of opinion among botanists, meteorologists,climatologists, and others shapes itself rather definitely.Correlations, if legitimate, may corroborate suspected relationships but they neither reveal cause nor constitute a basis for interpretation beyond the samples participating in the calculations.It seems abundantly clear,first, that rainfall and temperature are of great importance to tree growth, second, that under a certain combination of interesting factors in certain localities rainfall and temperature have such a similarity at times in the fluctuations of tree growth and rainfall or temperature,and third,that correlations,even were they high degree,do not permit the derivation of past or future rainfall.

"The derivation of climate from tree growth should be sought,apparently,by other means than by direct quantitative attempts to base amount of rainfall on width of growth layers although at times,this,in a measure,can be done.Without doubt,'the methods of an ecological minded

botanist' applied to tree growth through physiological function and its dependent anatomical response should supplant the more simple, the more obvious but less fruitful and less valid methods of direct correlations. An understanding of plant physiology and anatomy brought about by judicious experimentation under the strict discipline of the botanist may ultimately reveal the criteria by which growth layers and their cellular structure will yield a picture of the soil-moisture regime and perhaps thereby indirectly a picture of rainfall type."

Vegetation

Yuncker, T.G. The vegetation of Honduras, a brief review. Chron.Bot.7(1): 26-27. Jan.1942. 450 C46
"References," p.27.

Water Conservation

Kirkbride, W.H. Central valley project in California. West.Soc.Engin.Jour. 46(3):[99]-115, illus. June 1941. 290.9 W522
"Paper presented at a meeting arranged by the Transportation Engineering Section and presented jointly with the Illinois Section, American Society of Civil Engineers."
The Central Valley Project is a water conservation plan to redistribute the waters of the Sacramento river watershed and San Joaquin river over the San Joaquin and Sacramento valleys of central and northern California.

Stout, Wilber. Conservation of Ohio's water resources. Ohio Engin.Expt.Sta. News 13(5):6-9, illus. Dec.1941. 290.9 Oh3En
"Address at the Friends of the Land Conference in Columbus, Ohio, July 18, 1941."

Wildlife Conservation

Fox, A.C. Farmer-sportsmen relationship improving. N.Dak.Outdoors 4(5):8-9, 14-15, illus. Nov.1941. 412.9 N815

Stearns, Joe. Beavers stage comeback, win gallant fight against extinction; Georgia gives protection. Outdoor Ga.10(5):4-5, illus. Nov.1941.
"In building a dam the beaver accomplishes in addition to water conservation, flood control and prevention of certain types of soil erosion. Top soil that would eventually finish up in the Atlantic ocean often is kept intact due to the efforts of beavers."

Wind Erosion

Chepil, W.S. and Milne, R.A. Wind erosion of soil in relation to roughness of surface. Soil Sci.52(6):417-433, illus. Dec.1941. 56.8 So3
"References," pp.420-431.
"The rate of soil flow under a wind force was found to vary inversely with the roughness of the surface which, in Bagnold's formula, is denoted by the relative value of $k^1$. The value of $k^1$ appeared to be dependent not only on the height of the surface obstructions but also on their nature and lateral frequency.
"Ridging cultivated soils markedly reduced the initial rate of soil

flow under all wind velocities used.Factors tending to reduce the rate of soil flow over a ridged as compared to a smooth surface appeared to be the reduction in the average wind velocity for some distance above the average surface and the trapping of soil on the leeward side of ridges.Those tending to increase the rate of flow over ridges appeared to be greater eddying of wind and greater wind velocity and consequent increase of erosion at the crest of ridges.The gross effect of the former pair of factors was always markedly greater than that of the latter."

Simms,D.H. Dust bowlers get a third chance. U.S.Bur.Agr.Econ.Land Policy Rev.4(12):11-14. Dec.1941. 1 Ec7La

"Twice burned,twice wary:People from Texas,Oklahoma,and Arkansas exposed their new farm lands in western New Mexico to wind erosion - the force that drove them out of former homes.But they learned the danger in time."

## BOOK AND PAMPHLET NOTES AND ABSTRACTS

American geophysical union. Transactions of 1941. 3 parts. Washington, D.C.,Published by the National research council of the National academy of sciences,July 1941. 330.9 Am3

Part 1. Joint regional meeting,South Pacific coast area,Sacramento, California,January 1941.Reports and papers(A)Section of hydrology(B) Western interstate snow-survey conference.Partial contents:Geology of the San Joaquin valley as related to the source and the occurrence of the ground-water supply,by Hyde Forbes,pp.8-20;The hydrology of the southern San Joaquin valley,California,and its relation to imported water-supplies,by I.M.Ingerson,pp.20-45(including discussion);Drainage in the San Joaquin valley as it may be affected by the Central Valley project,by W.W.Weir,pp.45-49;Total evaporation for Sierra Nevada watersheds by the method of precipitation and runoff differences,by C.H.Lee, pp.50-71(including discussions);A 100-year record of Truckee river runoff estimated from changes in levels and volumes of Pyramid and Winnemucca lakes,by George Hardman and Cruz Venstrom,pp.71-90;Some factors of the hydrology of the Sierra Nevada foothills,by P.B.Rowe, pp.90-101(including discussion);Potential floods in the Sacramento valley,by W.J.Parsons,jr.,pp.106-111(including discussion);Factors influencing runoff during the flood of December,1937,in northern California, by W.G.Hoyt,pp.124-129;Whither snow-surveys?by Harold Conkling,pp.135-137(including discussion);Round-table report on accuracy of streamflow forecasts for 1940:California cooperative snow-surveys:Results of 1940 forecasts,by Fred Padget;Summary of 1940 forecast for Owens river drainage basin,by J.E.Jones;Summary of 1940 forecast for Huntington, Florence,and Shaver Lakes,by W.A.Lang,Runoff from melting snow on the Mokelumne watershed,1940,by L.S.Hall,Nevada cooperative snow-surveys--eastern slope,Central Sierra Nevada:comparison of forecast and actual results,1940,by H.P.Boardman,G.G.Devore and Leigh Sanford,Experience with irrigation-water forecasting in upper Columbia drainage-basin during 1940,by J.C.Marr;Report on snow-surveys and actual conditions in the Columbia,Kootenay,and Okanagan basins,and the coastal belt adjacent to Vancouver for 1940,by S.H.Frame;Oregon stream-flow forecasts and factors influencing accuracy in 1940,by R.A.Work and J.H.Ryan,pp.138-146;

Correlation of stream-flow and snow-cover in Colorado,by R.L.Parshall, pp.153-159;The use of snow-survey prediction in the operation of combined flood-control and conservation reservoirs for regulation of snow-melt run-off,by A.C.Showman,pp.170-173(including discussion);Progress toward a rational program of snow-melt forecasting,by Merrill Bernard,pp.176-178;Forecasting the date of the decline of the Carson rivers on the basis of the seasonal percentage of the contributing snow-cover,by Peter Krummes,pp.205-207(including discussion).

Part II. Twenty-second annual meeting April 30 to May 3,1941,Washington, D.C. Reports and papers,general assemblies and Sections of geodesy, seismology,meteorology,terrestrial magnetism and electrivity,oceanography, volcanology,and tectonophysics. Partial contents:Geomorphic aspects of normal and accelerated erosion,by C.F.Stewart Sharpe,pp.236-240;Land-erosion -- normal and accelerated -- in the semiarid west,by R.W.Bailey; pp.240-261(including discussions);Recent developments in the dynamics of wind-erosion,by F.J.Malina,pp.262-287(including discussion);Dynamics of water erosion on land-surfaces,by Leonard Schiff and R.E.Yoder,pp.287-305(including discussion);Dynamics of entrainment of erosional debris and sedimentation,by C.B.Brown,pp.305-315(including discussion); Physiographic engineering;land-erosion controls,by W.C.Lowdermilk,pp.316-320.

Part III. Reports and papers,Section of hydrology.Partial contents: The viscosity of highly concentrated underflows and its influence on mixing,by H.A.Einstein,pp.597-603;Engineering calculations of suspended sediment,by E.W.Lane and A.A.Kalinske,pp.603-607;Some experiments on the transportation of suspended load,by V.A.Vanoni,pp.608-621(including discussion);A consideration of factors influencing reservoir-sedimentation in the Ohio valley region,by G.M.Brune and R.E.Allen,pp.649-655; Application of the infiltration-theory to engineering practice,by L.K. Sherman and L.C.Mayer,pp.666-667;Methods for the measurement of infiltration,by H.G.Wilm,pp.678-686;Factors influencing infiltration-rates into some California soils,by M.R.Heberty and A.F.Pillsbury,pp.686-697 (including discussion);Measurements of the fall-velocity of water-drops and raindrops,by J.O.Laws,pp.709-721(including discussion);A proposed method for calculating stream-flow,by O.E.Guthe and J.C.Owen, pp.799-809(including discussion);Period versus instantaneous distribution-coefficients,by W.E.Smith,pp.851-856;Runoff from terraced areas under conditions of extreme flood,by D.W.Cardwell and W.E.Dickerson,jr.pp.856-862;Preliminary results of runoff-studies at Fennimore,Wisconsin,show low rates and amounts of runoff,by N.E.Minshall,pp.871-874;Estimating annual yield from ungaged drainage-basins and effect of land-use treatment on surface-runoff,by C.S.Jarvis and H.C.Murto,pp.875-893;Appendix A - A list of current publications on snow and ice,by Carl Elges,R.W.Burhoe, and L.Jacchia,pp.981-1005.

Caldwell,J.C.,Bailey,J.L. and Watkins,R.W. Our land and our living. 301pp., illus. Syracuse,N.Y.,L.W.Singer co.[1941] 279.081 C12

The authors are members of the Tennessee State conservation department. Book was written for grade schools.

Contents:Pt.1.Our good earth;Pt.2.Muddy waters;Pt.3.Forests and people; Pt.4.Our wild life resources; Pt.5.Our buried treasures.

California Department of public works.Division of water resources. Kaweah river flows,diversions and service areas prepared under cooperative agreements,dated September 30,1939,between the Kaweah Delta Water Conservation District,Kaweah River Association and St.Johns River Association and the Division of water resources,Department of public works, State of California,1940. Calif.Dept.Pub.Works.Div.Water Resources Bul.49. 348pp.,fold.map in pocket. Sacramento,1940. 290.9 C123 no.49

Fourcade,H.G. Check-list of flowering plants of the Divisions of George, Knysna,Humansdorp,and Uniondale. So.Africa Bot.Survey Mem.20. 127pp. Pretoria,Govt.printer,1940. 460.46 So8 no.20

Gates,F.C. Weeds in Kansas. Kans.State Bd.Agr.Rpt.v.60,no.243. 360pp., illus. Topeka,1941. 2 K13Re

Herriot,R.I.and Johnston,E.J. A soil survey of the Waikerie irrigation area, South Australia. Austral.Council Sci. & Indus.Res.Bul.141. 44pp.,map. Melbourne,1941. 14 Au72B no.141

Hopkins-Rains-Wood soil conservation district.Board of supervisors. Soil conservation district program for Hopkins-Rains-Wood soil conservation district no.418,Texas. 29pp.,illus. Sulphur Springs,Tex.,1941. 56.7 H772

International boundary commission,United States and Mexico. Flow of the Rio Grande and tributary contributions from San Marcial,New Mexico to the Gulf of Mexico,1940,with maximums,minimums and normals. Internal. Boundary Comn.U.S.and Mex.Water Bul.10. 112pp. [El Paso,Tex.? 1941] 150.1 In85W no.10

Johannesburg.University of Witwatersrand.Botanical department. A summarised report upon the work accomplished during the year 1940/41:soil erosion and grassland improvement... 34pp.,mimeogr. Johannesburg, 1941. 60.19 J59 1940/41

Louisiana.Geological survey. Ground-water resources of Grant and La Salle parishes,Louisiana,by J.C.Maher. La.Geol.Survey.Geol.Bul.20. 95pp., illus. Baton Rouge,La.,1941. 406 L932 no.20

Mexico.Comision nacional de irrigacion. La obra de la Comission nacional de irrigacion durante el regimen del sr.gral.de division Lazaro Cardenas, 1934-1940. t.1. Mexico,1940. 55 M570 t.1
At head of title: Estados Unidos Mexicanos.
In Spanish.

New England regional planning commission. Water resources agencies in New England.Compiled with the cooperation of the state and federal agencies concerned. New England Reg.Planning Comn.Pub.63. 58pp.,processed. Boston,Mass.,1941. 280.7 N44P no.63

New Zealand.Department of scientific and industrial research. Fifteenth annual report[1940/41] 92pp. [Wellington,1941] 330.9 N48 15th 1940/41
Soil erosion,p.36.

Northern Great Plains regional conference. Northern Great Plains regional summary of state land use planning reports on unified state agricultural programs to aid in national defense and meet the impacts of war. Prepared by the Northern Great Plains regional conference, June 16-19, 1941. 80pp., processed. [n.p., 1941] 281.12 St2N

Nyasaland. Department of agriculture. Annual report, 1940. 24pp. Zomba, Govt. printer, 1941. 24 N98A 1940.
Soil conservation, p.18.

Oklahoma academy of science. Proceedings...v.XXI. 149pp. Guthrie, Okla., 1941. 500 Ok42
Partial contents: Measurement of sediment in Boomer creek reservoir, Payne county, Oklahoma, by H.J. Harper, pp.111-116; Dams, reservoirs and water supplies in Oklahoma, by C.N. Gould, pp.117-118.

Pennsylvania. Department of forests and waters. Division of hydrography. Stream flow records of Pennsylvania...for the year October 1, 1939 to September 30, 1940. 207pp. [Harrisburg, 1941] 292.9 P383 1939/40

Pennsylvania nut growers' association. Report of the proceedings of the ninth annual meeting and 1940 field day. 41 numb.l., mimeogr. Harrisburg, Pa., 1941. 94.69 P38 9th 1941
Nut trees in relation to wildlife, by C.C. Freeman, pp.29-34.

Punjab engineering congress. Minutes of proceedings...1940, v. XXVIII, edited by members of the council. 280h pp., illus. Lahore, Printed at the Kapur art printing works [1941] 290.9 P96 v.28, 1940
Partial contents: Remodeling distributaries and distribution of water to areas irrigated by colony canals, by A.W.M. Jesson, pp.1-43a; Theory and physics of seepage losses from canals, by K.R. Sharma, pp.45-62a; Shock in regime canals, by Gerald Lacey, pp.95-100a; The formation and reclamation of Thur lands in the Punjab, by M.L. Mehta, pp.123-177a; Flow in expansion in open channels, by A.R. Thomas, pp.179-191a; Improved adjustable proportionate modules and open flume outlets, by K.R. Sharma, pp.193-223a; An outline of town planning, by U.A. Coates, pp.225-242a; Lining of channels, by G.R. Sawhney, pp.275-280a.

South Africa. Department of agriculture and forestry. Agriculture and the war. Annual report of the secretary... for the year ended 31 August 1941. Farming in So. Africa 16(189):403-431. Dec. 1941. 24 So842
Soil and veld conservation, pp.421-425.

South Africa. Department of agriculture and forestry. Division of soil and veld conservation. Pasture research in South Africa. Progress report no.2. 388pp., illus. Pretoria, Govt. printer, 1940. 60.19 So82 no.2

Strom, H.G. River control in New Zealand and Victoria. 131pp., illus. Melbourne, Govt. printer, 1941. 290 St84

Washington. Department of conservation and development. Tenth biennial report...October 1, 1938 to September 30, 1940. 150pp. Olympia, 1941. 279.9 W27 19th, 1938/40
Partial contents: Division of hydraulics and water resources, pp.11-19; Flood control, pp.123-126.

Woodward,C.R. Ploughs and politics.Charles Read of New Jersey and his notes on agriculture,1715-1774. 468pp.,illus. New Brunswick,Rutgers university press,1941. 120 R22
The husbandry of the soil,pp.235-253.

## STATE EXPERIMENT STATION AND EXTENSION PUBLICATIONS

### Arkansas

Nielson,E.L. Adaptability of grass species to Arkansas. Ark.Agr.Expt.Sta. Bul.408. 62pp. Fayetteville,June 1941. 100 Ar42 Bul.408
"The shift in recent years away from row-crop agriculture,and the increased interest in soil-conserving crops,has been accompanied by a demand for the development or the introduction of additional species of perennial grasses suitable for meadow and pasture purposes..."

### Colorado

Stewart,T.G.and Hamman,A.J. The soil conservation district.A legal organization for solving farm problems. Colo.Agr.Col.Ext.Bul.373-A. 20pp., illus. Fort Collins,July 1941. 275.29 C71E no.373-A

### Georgia

Ward,F.C. Conserving Georgia soil through organized action in soil conservation districts. Ga.Agr.Col.Ext.Serv.Bul.485. [14]pp.,illus. Athens, Aug.1941. 275.29 G29B no.485

### Illinois

Illinois agricultural experiment station.Department of agricultural economics. Summary of farm account record study on 107 farms in the Leroy soil conservation project area,McLean county,Illinois,1940. Ill.Agr.Col.Ext. Serv.[Pub.]AE1658. 32pp.,mimeogr. [Urbana,1941] 275.29 I162P no.1658
By E.L.Sauer,C.C.Morgan and H.C.M.Case.

### Kansas

Wenger,L.E. Re-establishing native grasses by the hay method. Kans.Agr. Expt.Sta.Cir.208. 16pp.,illus. Manhattan,Oct.1941. 100 K13S Cir.208
"Native grasses are better adapted than other available species for revegetating land in the drier sections of Kansas.
"Spreading the mature hay of native grasses on a shallow tilled seedbed with a manure spreader and packing this material in with a subsurface packer has been demonstrated a practical method for revegetating areas in any section of Kansas where native grass pastures will furnish seed material..."

### Massachusetts

Beaumont,A.B. Natural land types of Massachusetts and their use. Mass. Agr.Expt.Sta.Bul.385. 16pp.,illus. Amherst,May 1941. 100 M38H Bul.385
"This represents an attempt to supply certain technical information regarding soils considered essential as a basis for sound land-use studies and classifications."

Michigan

Grantham,G.M.and Millar,C.E. Sandy soils,methods of management. Mich.Agr. Expt.Sta.Spec.Bul.248(first revision) 39pp.,illus. Lansing, 1941. 100 M58S Spec.Bul.248

Montana

Isaac,E.E. Shelter belts for Montana. Mont.Agr.Col.Ext.Serv.Bul.194. 20pp.,illus. [Bozeman]Mar.1941. 275.29 M76C no.194

Oklahoma

Bardsley,C.R.S. Appurtenances for open channel hydraulics.Part I. Okla. Engin.Expt.Sta.Pub.48. 20pp.,illus. Stillwater,1941. 290.9 Ok4 no.48

Virginia

Lillard,J.H.,Rogers,H.T.,and Elson,Jesse. Effects of slope,character of soil, rainfall,and cropping treatments on erosion losses from Dunmore silt loam. Va.A r.Expt.Sta.Tech.Bul.72. 32pp.,illus. Blacksburg, 1941. 100 V81S Tech.Bul.72

"Literature cited,"pp.31-32.

"Run-off and erosion losses are dependent upon many interrelated factors some of which are not easily characterized or controlled.It is impossible at present to assign precisely to any one factor its contribution to the sheet erosion process either in a general way or for a specific condition.The conclusions reported herein are based on information about the dominant erosional influences which was obtained during the 4-year period of the experiment(1937-1940)."

Massey,A.B. Farm weeds:their importance and control. Va.Polytech.Inst.Bul. v.24,no.14. 120pp.,illus. Blacksburg,1941. 79 M38 no.14

Obenshain,S.S.and Gish,P.T. The effect of green-manure crops on certain properties of Berks silt loam. Va.Agr.Expt.Sta.Tech.Bul.73. 12pp. Blacksburg,1941. 100 V81S Tech.Bul.73

"Literature cited,"pp.11-12.

Wisconsin

Hays,O.E.and Clark,Noble. Cropping systems that help control erosion. Wis. Agr.Expt.Sta.Bul.452. 23pp.,illus. Madison,June 1941. 100 W75 Bul.452

"The three-year rotation commonly practiced in the past does not give adequate control of erosion except under very limited conditions.

"Slopes with a length ofmore than 72 feet and a slope greater than 3% require a rotation with two or more years of hay if moderately eroded.If severely eroded,a rotation with four or more years of hay is required.

"Moderately eroded fields as steep as 9 to 15% require a long rotation,with hay or pasture protecting the surface from 66 to 85% of the time.Under these conditions rotations 6 to 12 years long are necessary, with only one year of corn,and one year of small grain,in a particular rotation.

"If the fields are strip cropped or terraced,the rotations can be

shortened somewhat,and they will still keep the soil losses under the same limit.This is particularly true with slopes between 6 and 12%. Above 12%the erosion losses increase enormously when the land is plowed, and every effort should be made to keep such slopes protected,as continuously as possible,with hay or grass."

Zeasman,O.R. Grass waterways control and prevent gullies. Wis.Agr.Col.Ext. Cir.320. 16pp.,illus. Madison,Aug.1941. 275.29 W75C no.320
"The problem of erosion increases with age of farming.On virgin soils erosion was scarcely noticed.Now evidence of the problem,raw subsoil spots in fields,reduced crop yields,jagged gullies,etc.,are becoming all too common.A survey of erosion in Wisconsin during the summer of 1940 showed that more than 7 million acres of farm land had lost approximately one plow depth of soil.Limited areas have been entirely destroyed by erosion,particularly by deep gullies and debris cones.This damage will not remedy itself,but the destruction will continue and expand and the cost of control or reclamation will increase rather than decrease.The investment in farm improvements is undermined by the reduced value and lower fertility of the land damaged by erosion.Every farmer on folling land needs to fight the waste from soil erosion by the use of improved methods."

## U. S. GOVERNMENT PUBLICATIONS

### Agriculture Department

U.S.Bureau of agricultural economics. ...Report on land use classification, Covington county,Mississippi(preliminary)by R.S.Ratcliffe and C.G. Deaton. 12 numb.l.,maps.,processed. Washington,D.C.,1940. 1.941 L3R291

U.S.Department of agriculture. Climate and man;yearbook of agriculture. 1248pp.,illus. Washington,U.S.Govt.print.off.,1941. 1 Ag84Y 1941
Contains bibliographies.
Partial contents:Climate and the world pattern,by D.L.Blumenstock and C.W.Thornthwaite,pp.98-127;Climate and settlement in the Great Plains, by C.W.Thornthwaite,pp.177-187;The hydrologic cycle,by Benjamin Holzman, pp.532-536;Some climatic factors that affect run-off,by G.W.Musgrave, pp.536-545;Evaporation and transpiration,by C.E.Thornthwaite and Benjamin Holzman,pp.545-550;Storms and floods,by Benjamin Holzman and Albert Showalter,pp.551-557;Land use in flood control,by A.C.Ringland and O.E. Guthe,pp.561-565.

U.S.Department of agriculture. Survey report for the Los Angeles river watershed.Letter from the under secretary of agriculture transmitting a copy of a survey report for the Los Angeles river watershed. 68pp.,map. Washington, U.S.Govt.print.off.,1941. 1 Ag86S1
77th Congress,1st session,House document no.426.

U.S.Department of agriculture.Departmental committee on gardening programs. A coordinated defense program in home and community gardening. 10 numb. l.,mimeogr. [Washington,D.C.,1941] 1.90 C2G16C
Suggested by the Garden committee of the United States Department of agriculture and the Coordinating subcommittee of the nutrition committee of the Federal security agency.

U.S.Extension service. Progress report on the relation of extension specialists to land use planning. 9 numb.l. [Washington, D.C., 1941] 1.913 E2P942

"On February 28,1941,the Director of extension work appointed a committee to study the various phases of land use planning in relation to the work of subject matter specialists and to develop recommendations as to ways in which such specialists can contribute most effectively to the objectives of this cooperative endeavor."

U.S.Farm credit administration. Soils manual for the eleventh farm credit district with crop requirements supplement. 595pp.,mimeogr. Washington,D.C.,1941. 166.3 So3.

Prepared by G.W.Patterson,A.E.Beaumont,and R.L.Adams. California,Nevada,Utah,Arizona.

U.S.Office of land use coordination.Water facilities board. Water facilities program of the United States Department of agriculture for the fiscal year 1942. 5pp.,mimeogr. [Washington,1942] 1.915 W2W292

Soil Conservation Service

Batchelor,J.M. Detailed soil conservation farm plan including hillculture principles,Piedmont project LU-GA-3,Hillsboro,Ga. 15 numb.l.,mimeogr. Washington,D.C.,1941. 1.9602 D48

"This article is for use of Soil Conservation Service technicians and is not to be used for publication or distribution outside of the Soil Conservation Service."

Fletcher,J.E.and Beutner,E.L. Erodibility investigations on some soils of the Upper Gila watershed. U.S.Dept.Agr.Tech.Bul.794. 32pp.,illus. Washington,U.S.Govt.print.off.,1941. 1 Ag84Te no.794

"Literature cited,"pp.29-31.

Graham,E.H. Grasses in the conservation of soil and wildlife. 19pp., mimeogr. Washington,D.C.,1941. 1.96 Op2Gr

Preliminary edition,prepared solely for use in the Soil Conservation Service.(Not available for general distribution.)

Hays,O.E. A guide to conservation planning. 5 numb.l.,mimeogr. [Milwaukee, Wis.,1941] 1.9605 G95

U.S.Soil conservation service and Wisconsin Agricultural experiment station cooperating.

McDonald,Angus. Early American soil conservationists. U.S.Dept.Agr.Misc. Pub.449. 63pp.,illus. Washington,U.S.Govt.print.off., 1941. 1 Ag84M no.449

"Literature cited,"pp.61-63.

Jared Eliot, Samuel Deane, Solomon Drown, John Taylor, John Lorain, Isaac Hill,Nicholas Sorsby, Edmund Ruffin.

O'Rourke,F.L. The preparation of wreaths,roping and other Christmas decorations. U.S.Soil Conserv.Serv.Contrib.Hillculture Res.no.1. 15 numb.l.,mimeogr. Washington,D.C.,1941. 1.96 R31Con no.1

"Not for public distribution."

Parsons,D.A.and Blaisdell,F.W. Soil and water conservation instruments.No.1 - Notes on the operation of the Fergusson recording rain and snow gage. U.S.Soil Conserv.Serv.SCS-TP-44. 24 numb.l.,illus. Washington, D.C., 1941. 1.96 Ad6Tp no.44

Ramser,C.E. Application of hydrology to soil and water conservation. 27 numb.l.,illus.,mimeogr. Washington,D.C.,1941. 1.96R31Ap
"This paper with slight changes presented at the Hydrology conference held at State College Pennsylvania,June 30- July 2,1941.

Thornthwaite,C.W. Atlas of climatic types in the United States,1900-1939. U.S.Dept.Agr.Misc.Bul.421. 7pp.,96 plates. Washington, U.S.Govt. print.off.,1941. 1 Ag84M no.421
"Literature cited,"p.5.
"Selected references,"pp.5-7.

U.S.Soil conservation service. Compilation of rainfall and run-off data from the watersheds of the Ark.-La.-East Texas sandy lands conservation experiment station,Tyler,Texas,1931-39. U.S.Soil Conserv.Serv.SCS-TP-41. 21 numb.l.,illus.,charts. Washington,D.C.,1941. 1.96 Ad6Tp no.41
Prepared in cooperation with the Texas Agricultural experiment station.

U.S.Soil conservation service. Compilation of rainfall and run-off from the watersheds and terraced areas of the Fort Hays conservation experiment station,Hays,Kansas,1930-38. U.S.Soil Conserv.Serv.SCS-TP-37. 15 numb.l.,illus.,charts. Washington,D.C.,1940. 1.96 Ad6Tp no.37

U.S.Soil conservation service. Hydrologic data North Appalachian experimental watersheds,Coshocton,Ohio,1931. U.S.Dept.Agr.Hydrologic Bul.1. 193pp., illus. Washington, U.S.Govt.print.off.,1941. 1 Ag84Hb no.1

U.S.Soil conservation service. Soil and water conservation in the U.S.A. v.p.,mimeogr. Washington,D.C.,1941. 1.96 Ad6Sw
"This manuscript includes several articles prepared by the Soil Conservation Service for the International Institute of Agriculture,Rome, Italy.Some of these articles have been printed in the Monthly Bulletin of Agricultural Science and Practice..."
Contents:Soil erosion in the United States,by H.H.Bennett;The program of the United States Soil Conservation Service,by H.H.Bennett;Legal and political aspects of the erosion control effort in the United States,by P.M.Glick and E.E.Ferguson;Measures and practices for controlling erosion and conserving water,by C.R.Enlow;Soil conservation research in the United States,by M.L.Nichols.

U.S.Soil conservation service.Division of irrigation. Utilization of the water of the Beaumont plains and San Jacinto basin,California.A progress report by A.A.Yount,P.A.Ewing[and]H.F.Blaney. 336pp.,mimeogr. [Washington,D.C.]February 1941. 1.96 R31U
"Literature cited,"pp.268-271.

U.S.Soil conservation service.Northern great plains region. Save your soil. Contour strip cropping saves both soil and water in a conservation program for your farm or ranch. U.S.Soil Conserv.Serv.North.Great Plains Reg.Conserv.Folder 1. folder,illus. Lincoln,Nebr., 1941. 1.6 So39C no.1

U.S.Soil conservation service.Northern great plains region. Save your soil. Protected waterways in cultivated fields in a conservation program for your farm or ranch. U.S.Soil Conserv.Serv.North.Great Plains Reg. Conserv.Folder 2. folder,illus. Lincoln,Nebr.,1941. 1.6 So39C no.2

U.S.Soil conservation service.Northern great plains region. Save your soil. Save soil,moisture with contour tillage in a conservation program for your farm or ranch. U.S.Soil Conserv.Serv.North.Great Plains Reg. Conserv.Folder 6. folder,illus. Lincoln,Nebr.,1941. 1.6 So39C no.6

U.S.Soil conservation service.Northern great plains region. Save your soil. Strip cropping for control of wind erosion in a conservation program for your farm or ranch. U.S.Soil Conserv.Serv.North.Great Plains Reg. Conserv.Folder 5. folder,illus. Lincoln,Nebr.,1941. 1.6 So39C no.5

U.S.Soil conservation service.Northern great plains region. Save your soil. Wildlife and soil conservation go hand in hand in a conservation program for your farm or ranch. U.S.Soil Conserv.Serv.North.Great Plains Reg.Conserv.Folder 3. folder,illus. Lincoln,Nebr., 1941. 1.6 So39C no.3

U.S.Soil conservation service.Northern great plains region. The significance of grassland ecology to the northern great plains,by B.W.Allred. 27 numb.l.,mimeogr. [Lincoln]1941. 1.9607 Si2
"Literature cited,"p.27.
A discussion presented before the Northern great plains conference, Mandan,North Dakota,June 26,1941.

U.S.Soil conservation service.Southeast region. Soil conservation in Puerto Rico and the Virgin Islands of the United States.A handbook(for Soil conservation service technicians,vocational agricultural teachers, agricultural extension agents and others in Puerto Rico and the Virgin Islands.) 141 numb.l.,illus. San Juan,1941. 1.9602 So33

Geological Survey

U.S.Geological survey. Investigations of methods and equipment used in stream gaging.Part I. Performance of current meters in water of shallow depth,by C.H.Pierce... U.S.Geol.Survey Water-Supply Paper 868-A. 35pp.,illus.,charts. Washington, U.S.Govt.print.off.,1941. 407G29W no868-A
Prepared in collaboration with the Hydraulic laboratory committee of the Geological Survey.

U.S.Geological survey. Surface water supply of the United States,1931.Part I. North Atlantic slope basins[by]C.G.Paulson[and others] 603pp. Washington, U.S.Govt.print.off.,1941. 407 G29W no.871
Prepared in cooperation with the states of Connecticut,Maine,Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania,Vermont, Virginia, and West Virginia.

Miscellaneous

U.S.National resources planning board. A national program of public works for range conservation.Preliminary edition. 5 pts.,mimeogr. [Washington,D.C.,1941] 173.2 N214Nar-Prel.ed.
Prepared by representatives of the Department of the interior and the Department of agriculture for the Land committee of the National resources planning board.
Contents.Part 1. The general objectives of range conservation,their part in land use activities as a whole and in the nation's economy. - Part 2.The nation's range — its past,present and future. - Part 3. A quantitative indication of long range needs for range conservation. Part 4. Probable costs and benefits of public works related to range lands. - Part 5. Factors, methods, and problems in evaluating range conservation activities.

U.S.Waterways experiment station. Model study of hydraulic characteristics of power tunnel,Fort Peck dam. U.S.Waterways Expt.Sta.Tech.Memo.no. 185-1. 36pp.,illus.,charts. Vicksburg,Miss.,1941. 292 Un342 no.185-1

U.S.Waterways experiment station. Model study of plans for reduction of wave action in Grand Marais harbor,Minnesota. U.S.Waterways Expt.Sta. Tech.Memo.no.186-1. 31pp.,illus. Vicksburg,Miss.,1941. 292 Un342m.186-1

U.S.Waterways experiment station. Model study of the spillway for the Denison dam,Red river. U.S.Waterways Expt.Sta.Tech.Memo.no.177-1. 36pp.,illus.,charts. Vicksburg,Miss.,1941. 292 Un342 no.177-1

## BIBLIOGRAPHIES AND LISTS

U.S.Bureau of agricultural chemistry and engineering.Library. List of translations available in the U.S.Department of agriculture. 275pp., mimeogr. [Washington,D.C.]1941. 1.952 L2L69

U.S.Information service. Reference list of national defense publications;a selection of pertinent bulletins and articles prepared by federal agencies actively engaged in the national defense program,corrected to July 15,1941. 21pp.,processed. [Washington,1941] 173.2 In3R
"Compiled by United States Information Service,a division of Office of Government Reports."

## PERSONNEL AND TRAINING

Benedict,M.R. Training of personnel for the rural social sciences. Jour. Farm Econ.23(4):765-770. Nov.1941. 280.8 J822

Civil service assembly of the United States and Canada. Public relations of public personnel agencies.A report submitted to the Civil service assembly by the Committee on public relations of public personnel agencies. 259pp. Chicago,Civil service assembly of the United States and Canada,1941. 249.3 C492P

Darley,J.G. The fields of personnel work. 48pp.,illus. Chicago [1941] 249.3 D24
American job series.Occupational monograph no.20.
Bibliography,p.[3]of cover.

Purdue university.Engineering extension department. Personnel and industrial-relations problems in the defense program.Proceedings of the Personnel and industrial relations institute held at Purdue university,May 15-16, 1941. Purdue Univ.Engin.Ext.Dept.Personnel Bul.no.6. 62pp. Lafayette,Ind.,1941. 249.39 P97 no.6

Roethlisberger,F.J. Management and morale. 194pp. Cambridge,Mass., Harvard university press,1941. 249.3 R74M
"This book...is a study of what is involved...in human collaboration; it is addressed to business executives and,more generally,to the intelligent public.The study,which is developed in some detail,serves to demonstrate that collaboration cannot be left to chance,that by inadvertence we have done exactly this for more than a century,and that it is this neglect more than any other determination which has issued in the present chaos."

Scott,W.D. Personnel management;principles,practices,and point of view. Ed.3, 589pp.,illus. New York and London,McGraw-Hill book co.,inc., 1941. 249.3 Sco9 Ed.3
Bibliography,pp.551-571.

FINIS